

## Supporting Information

### A Hierarchically Ordered Mesoporous-Carbon-Supported Iron Sulfide Anode for High-Rate Na-ion Storage

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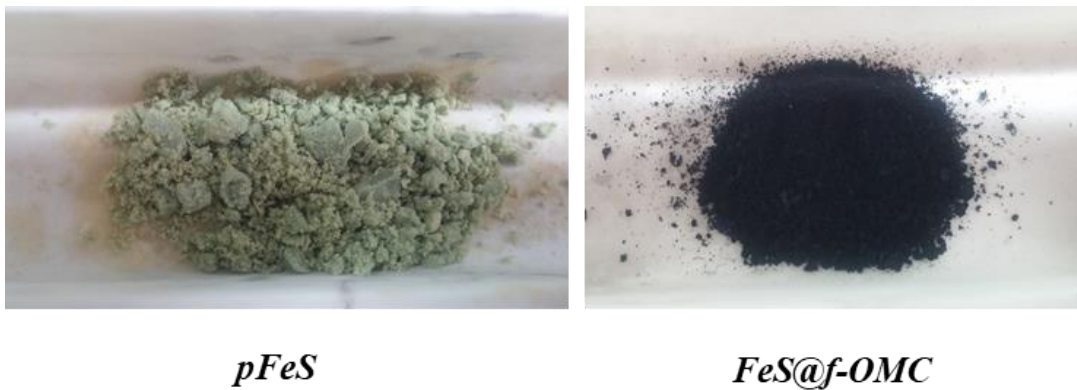
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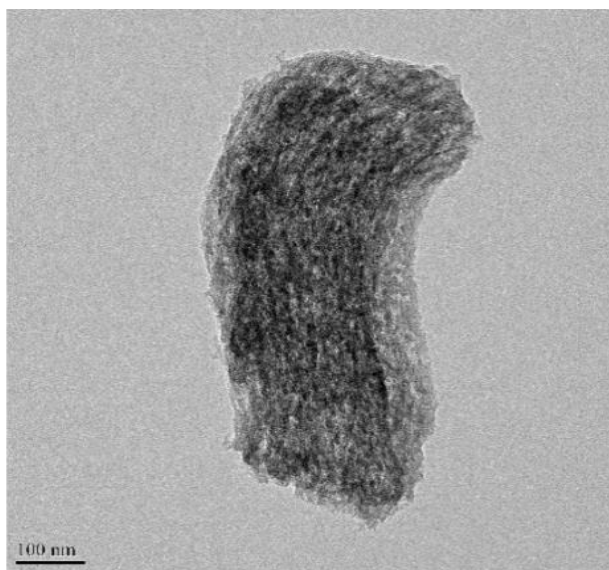
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## Section S1 Synthesis of SBA-15 template and CMK-3 Ordered Mesoporous Carbon

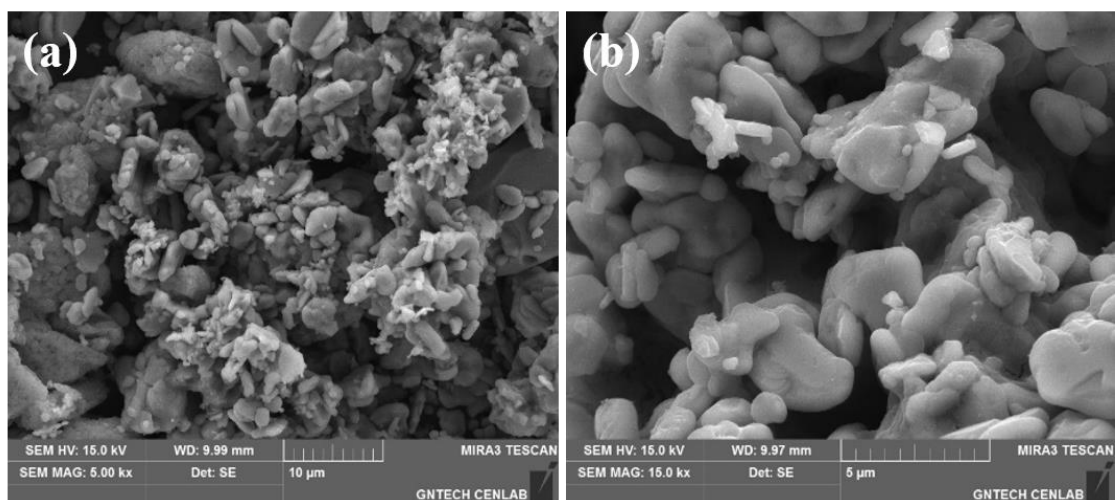
Initially, the *CMK-3 Ordered Mesoporous Carbon* derived from the SBA-15 silica template was synthesized by modifying our previous work utilizing P123 as a surfactant, TEOS as silica source and sucrose as carbon source. Briefly, 2.0 g of P123 was dissolved in 2 M HCl (60 mL) at 40 °C with continuous stirring. 4.2 g TEOS was then added to the solution and stirred vigorously to ensure homogeneous mixing. The mixture was kept at 40 °C for 24 h and later aged in a Teflon jar at 130 °C for 3 consecutive days. The product was collected by vacuum filtration and dried overnight at 80 °C. The calcination of the obtained white powder at 550 °C for 4 h in air atmosphere yielded the ordered mesoporous SBA-15 silica template. To prepare the CMK-3 ordered mesoporous carbon, 2.0 g of sucrose was SBA-15 via an incipient wetness impregnation method. Afterward, the sample was dried at 80 °C for 12 h. This impregnation/drying step was carried out multiple times to ensure the complete filling of the mesopores in the SBA-15 template. Finally, the carbonization of the sucrose impregnated SBA-15 was carried out by heat treatment at 850 °C for 4 h at a ramp rate of 5 °C min<sup>-1</sup>. The obtained black colored powder was soaked in 7 wt% HF solutions for 36 h to remove the silica template altogether. The final product was washed thoroughly with a copious amount of DI water and dried at 80 °C to obtain the CMK-3 ordered mesoporous carbon.



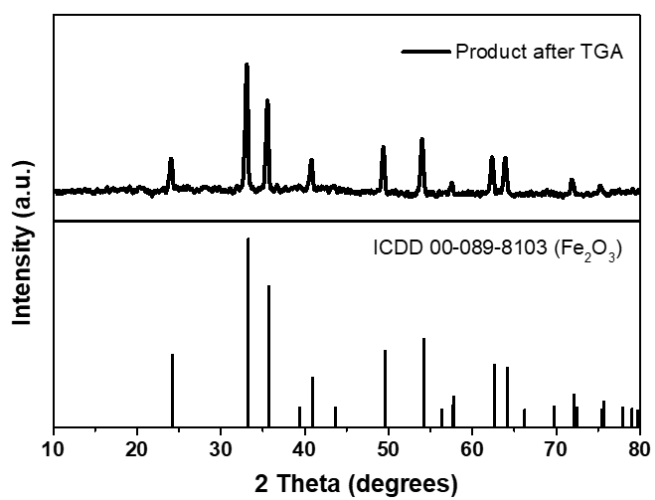
**Figure S1** As-synthesized pristine FeS and FeS@*f*-OMC anode materials.



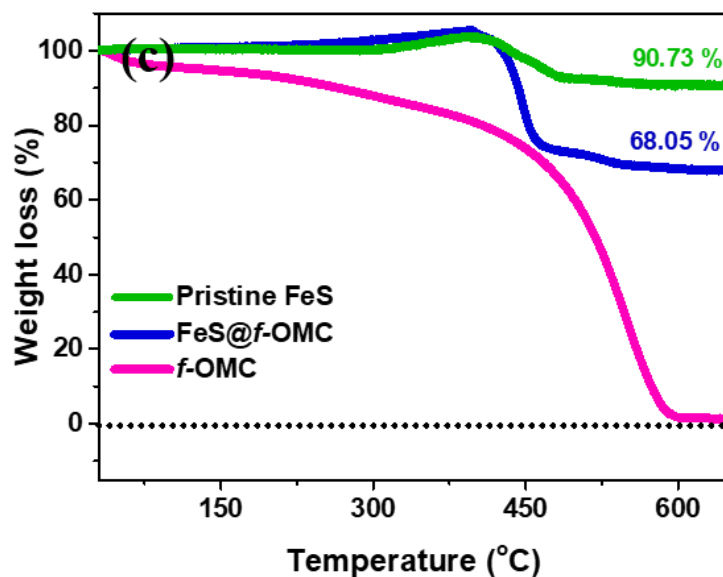
**Figure S2** TEM image of FeS@*f*-OMC composite.



**Figure S3** FE-SEM images of pristine FeS particles.



**Figure S4** XRD of FeS@*f*-OMC composite after TGA in air atmosphere.



**Figure S5** TGA curves in air atmosphere.

**Section S2** Estimation of FeS content in FeS@f-OMC composite by TGA

$$\%C = \frac{R1 - R2}{0.90824 - R2}$$

where %C denotes the FeS content in the composite, R1 the mass residue of FeS@f-OMC composite (from TGA curve, blue line), R2 the mass residue of f-OMC (from TGA curve, pink line), and 0.90824 the theoretical mass residue of pristine FeS assuming final product after heat treatment in air as Fe<sub>2</sub>O<sub>3</sub>. Accordingly, R1 = 68.05 %, R2 = 0% (from TGA)

FeS content = 75% ; f-OMC content = 15%.